Aspirin for the prevention of spontaneous preterm birth

Published: 22-01-2016
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The objective was to assess the effectiveness of low-dose aspirin in the prevention of recurrent preterm birth.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Pregnancy, labour, delivery and postpartum conditions
Study type	Interventional

Summary

ID

NL-OMON29647

Source
NTR

Brief title
APRIL

Condition

- Pregnancy, labour, delivery and postpartum conditions

Synonym
preterm delivery, prematurity

Health condition

pregnancy, recurrent preterm birth, recurrent preterm labour, pretem birth, preterm labour, PTB, prevention, aspirin, ASA zwangerschap, herhaalde vroeggeboorte, vroeggeboorte, preventie, aspirine

Research involving
Human

Sponsors and support

Primary sponsor: VU medical center Amsterdam
Source(s) of monetary or material Support: ZonMw

Intervention

- Medicine

Explanation

Outcome measures

Primary outcome

Preterm birth, defined as birth at a gestational age less than 37 weeks.

Secondary outcome

Composite of poor neonatal outcome, the individual components of the composite perinatal outcome, number of days on ventilation support (ventilation and /or respiratory support by Continuous Positive Airway Pressure (CPAP)), infant respiratory distress syndrome (IRDS) that requires treatment with surfactant, patent ductus arteriosus (PDA) that requires treatment, cerebellar bleeding, days of admission on the NICU, convulsions, asphyxia, proven meningitis, pneumothorax and total days in hospital until 3 months corrected age.
Maternal outcomes; maternal side effects, maternal mortality, hospital admissions, maternal morbidity, placental abruption, maternal infection or inflammation, major ante- or post-partum haemorrhage. Subgroup analyses will be performed for women with a previous preterm birth before and after 30 and 34 weeks GA, contractions with intact membranes versus PPROM, women treated with progestagens versus no additional treatment, women with a short cervix (< 25 mm) in the current pregnancy and women initiating low dose ASA < 12 weeks versus 12-16 weeks of gestation.

Study description

Background summary

Preterm birth is the leading cause of neonatal morbidity and mortality. The recurrence rate of spontaneous preterm birth is high and additional preventive measures are required.

Study objective

The objective was to assess the effectiveness of low-dose aspirin in the prevention of recurrent preterm birth.

Study design

We performed a multicentre, double-blind, placebo-controlled, randomised trial in 8 tertiary and 26 secondary care hospitals in the Netherlands. We recruited women with a singleton pregnancy and a history of spontaneous preterm birth of a singleton between 22 and 37 weeks of gestation. Participants were randomly assigned to daily aspirin (80 mg) or placebo initiated between 8 and 16 weeks of gestation and continued until 36 weeks or delivery. The primary outcome was preterm birth before 37 weeks of gestation. We performed analyses by intention-to-treat. For the primary outcome, we performed a pre-specified sensitivity analysis including women with ≥80% compliance with medication. The trial was registered in the Dutch Trial Register (NTR5675, NL5553). <

Intervention

Low-dose aspirin (80 mg)

Contacts

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The Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Adults (18-64 years)
Elderly (65 years and older)
Elderly (65 years and older)

Inclusion criteria

- Pregnant women
- >18 years of age
- History of spontaneous preterm birth (Spontaneous preterm birth is defined as: birth following spontaneous contractions with intact membranes or birth after preterm ruptured membranes at a gestational age between 22 and 37 weeks)

Exclusion criteria

- Other indication for aspirin during pregnancy
- History of Indicated PTB for maternal reasons such as preeclampsia or HELLP
- History of indicated PTB for fetal reasons such as IUGR
- Fetal abnormalities in current pregnancy
- Multiple pregnancy either in the prior preterm birth pregnancy or current pregnancy
- Thrombocytopenia, thrombocytopathy
- Indications for the use of anticoagulants

Study design

Design

Study phase:	3
Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo
Primary purpose:	Prevention

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	31-05-2016
Enrollment:	406
Type:	Actual

IPD sharing statement

Plan to share IPD: Yes

Ethics review

Approved WMO Date:	22-02-2016
Application type:	First submission
Review commission:	METC Amsterdam UMC

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL5553
NTR-old	NTR5675
Other	54463 : ABR

Study results

Results posted:	25-01-2024
Actual enrolment:	406

Summary results

From 31 May 2016 to 13 June 2019, 406 women were randomised of which 387 were included in the analysis: 194 women were allocated to aspirin and 193 to placebo. Preterm birth <37 weeks occurred in 41 (21.2%) women in the aspirin group and 49 (25.4%) in the placebo group (RRR 0.83, 95% CI 0.58 to 1.20, p=0.323). In women who were ≥80% compliant with medication, preterm birth occurred in 19.2% versus 24.8% (RRR 0.77, 95% CI 0.48 to 1.25, p=0.291). There was significant effect modification by gestational age of the previous preterm birth (interaction term p=0.042), with women with a previous preterm birth <30 weeks of gestation (RRR 0.59, 95% CI 0.23 to 1.02, p=0.059) having more benefit from aspirin than those with a previous preterm birth ≥30 weeks. The rate of poor neonatal outcome was 4.6% versus 2.6% (RRR 1.79, 95% CI 0.61 to 5.25, p=0.288).

Adverse events

Among all randomized women, serious adverse events occurred in 11 (5.4%) women allocated to aspirin and 11 (5.4%) women in the placebo group. There were no differences between treatment groups (Table S4). None of these serious adverse events was considere

First publication

01-02-2022

URL result

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